

a piston reciprocably mounted in a cylinder having a cylinder wall, the cylinder wall having formed therein an exhaust port and a rear transfer port opposed to one another [thereto formed in it],

a crank case having an interior communicating with the rear transfer port [communicating with the interior of the crankcase] via a rear transfer passage,

the rear transfer port being arranged to open before the exhaust port closes whereby, in use, the cylinder is scavenged,

an inlet duct coupled to and arranged to supply combustion air to the crankcase, a throttling valve arranged to throttle the flow of air through the inlet duct, [and] a carburetor arranged to supply fuel into the inlet duct, [wherein the interior of] the crankcase [is divided into] having at least two substantially separated chambers defining at least two separate crankcase volumes, a rich volume and a lean volume, [that] each crankcase volume [communicates] communicating with the cylinder via a respective hole in the crankcase wall, [that] the cylinder wall [also has] having at least one lateral transfer port formed [in it at a position] between the rear transfer port and the exhaust port, the lateral transfer port being arranged to open before the exhaust port closes, [that] the lateral transfer port [communicates] communicating with the lean volume via a lateral transfer passage, [that] the rear transfer port [communicates] communicating with the rich volume, [that] the inlet duct [is] being divided over at least part of its length into at least two inlet passages, a rich passage and a lean passage, which communicates with the rich volume and the lean volume, respectively, and [that]

the carburetor and [and/or] the throttle valve are [so constructed and arranged that]  
adapted to supply, under high load operation, substantially all the fuel [supplied by the carburetor  
is introduced] into the rich passage and to supply, under low load operation, the fuel [supplied by  
the carburetor is introduced] into both the rich and lean passages. --

--2.(Amended) The engine as claimed in claim 1 in which the cylinder wall has formed  
therein two opposed lateral transfer ports [are formed on the cylinder wall], the interior of the  
crankcase is further divided into [three crankcase volumes, two rich volumes and one lean] a  
second rich volume, the lean volume communicating with both lateral transfer ports and both  
rich volumes communicating with the rear transfer port, and the inlet duct is further divided [into  
three inlet passages two] to have a second lean [passages and one rich] passage, the two lean  
passages communicating with the lean volume and the rich passage communicating with the two  
rich volumes. --

<sup>5</sup>  
--3.(Amended) The engine as claimed in claim 1 in which the carburetor has one or  
more jets arranged to introduce fuel into the inlet duct at a position immediately upstream of that  
at which it is divided into two or more inlet passages [and the throttle valve is positioned such  
that, under low load conditions, it permits the fuel discharged from the jet(s) to flow into both the  
rich an lean passages and, under high conditions, it directs substantially all the fuel to flow into  
the rich passage]. --